

What is claimed is:

- 1 1. An editing apparatus for an optical disk on which
- 2 a video object made up of a plurality of blocks and section
- 3 information are recorded, each block including a
- 4 plurality of sets of picture data, and the section
- 5 information specifying a reproduction section from a set
- 6 of picture data included in a block to a set of picture
- 7 data included in another block, the editing apparatus
- 8 comprising:
- 9 a specifying unit operable to specify a set of
- 10 picture data as a start point of a delete section and
- 11 another set of picture data as an end point of the delete
- 12 section in the reproduction section, in accordance with
- 13 an indication from a user;
- 14 a judging unit operable to judge whether $j-i-1 > u$ or
- 15 $j-i-1 < u$, $j-i-1$ being a total number of blocks present
- 16 between an i th block which includes the start point and
- 17 a j th block which includes the end point, i and j being
- 18 integers, and u being a predetermined integer;
- 19 a warning unit operable to give a warning to the user,
- 20 when $j-i-1 < u$; and
- 21 a partial deleting unit operable to rewrite, when
- 22 $j-i-1 > u$, the section information so that part of the
- 23 reproduction section preceding the delete section and
- 24 part of the reproduction section succeeding the delete

25 section become two consecutive reproduction sections, and
26 delete blocks from an $(i+s+1)$ th block to a $(j-t-1)$ th block
27 from the optical disk, s and t being integers that satisfy
28 $u=s+t$.

1 2. The editing apparatus of Claim 1,
2 wherein at least one set of picture data included
3 in the i th block has been compression-coded based on
4 correlation with at least one set of picture data included
5 in an $(i+s)$ th block, and
6 at least one set of picture data included in the j th
7 block has been compression-coded based on correlation
8 with at least one set of picture data included in a $(j-t)$ th
9 block.

1 3. The editing apparatus of Claim 1,
2 wherein each block includes audio data in addition
3 to the plurality of sets of picture data,
4 an $(i+s)$ th block includes audio data which is to be
5 reproduced synchronously with at least one set of picture
6 data included in the i th block, and
7 at least one set of picture data included in the j th
8 block has been compression-coded based on correlation
9 with at least one set of picture data included in a $(j-t)$ th
10 block.

1 4. The editing apparatus of Claim 1 further
2 comprising
3 a dividing unit operable to copy, when $j-i-1 < u$, part
4 of blocks from the i th block to an $(i+s)$ th block which
5 overlaps blocks from a $(j-t)$ th block to the j th block,
6 set a block sequence from the start of the video object
7 to the $(i+s)$ th block and a block sequence from the copied
8 part to the end of the video object as two independent
9 video objects, and rewrite the section information so that
10 the two video objects become the two consecutive
11 reproduction sections,
12 wherein the warning unit warns the user that a size
13 of data recorded on the optical disk will increase due
14 to the copying.

1 5. The editing apparatus of Claim 4 further
2 comprising:
3 a holding unit operable to hold mode information
4 showing that the editing apparatus is in a capacity
5 priority mode, the capacity priority mode being a mode
6 that prioritizes acquirement of free space on the optical
7 disk; and
8 a switching unit operable to switch the mode
9 information to an editing priority mode in accordance with

10 an indication from the user, the editing priority mode
11 being a mode that prioritizes flexibility in editing,
12 wherein the dividing unit copies the part only when
13 the mode information shows the editing priority mode.

1 6. The editing apparatus of Claim 5,
2 wherein if $j-i-1 < u$ when the mode information shows
3 the capacity priority mode, the specifying unit once again
4 specifies the two sets of picture data as the start and
5 end points so as to extend the delete section, in
6 accordance with an indication from the user.

1 7. An editing apparatus for an optical disk on which
2 a video object made up of a plurality of blocks and section
3 information are recorded, each block including a
4 plurality of sets of picture data, and the section
5 information specifying a reproduction section from a set
6 of picture data included in a block to a set of picture
7 data included in another block, the editing apparatus
8 comprising:

9 a specifying unit operable to specify a set of
10 picture data as a start point of a delete section and
11 another set of picture data as an end point of the delete
12 section in the reproduction section, in accordance with
13 an indication from a user;

14 a judging unit operable to judge whether $j-i-1 > u$ or
15 $j-i-1 < u$, $j-i-1$ being a total number of blocks present
16 between an i th block which includes the start point and
17 a j th block which includes the end point, i and j being
18 integers, and u being a predetermined integer;

19 a notifying unit operable to notify the user that
20 the deletion is prohibited, when $j-i-1 < u$; and

21 a partial deleting unit operable to rewrite, when
22 $j-i-1 > u$, the section information so that part of the
23 reproduction section preceding the delete section and
24 part of the reproduction section succeeding the delete
25 section become two consecutive reproduction sections, and
26 delete blocks from an $(i+s+1)$ th block to a $(j-t-1)$ th block
27 from the optical disk, s and t being integers that satisfy
28 $u=s+t$.

1 8. The editing apparatus of Claim 7,

2 wherein at least one set of picture data included
3 in the i th block has been compression-coded based on
4 correlation with at least one set of picture data included
5 in an $(i+s)$ th block, and

6 at least one set of picture data included in the j th
7 block has been compression-coded based on correlation
8 with at least one set of picture data included in a $(j-t)$ th
9 block.

1 9. The editing apparatus of Claim 7,
2 wherein each block includes audio data in addition
3 to the plurality of sets of picture data,
4 an (i+s)th block includes audio data which is to be
5 reproduced synchronously with at least one set of picture
6 data included in the ith block, and
7 at least one set of picture data included in the jth
8 block has been compression-coded based on correlation
9 with at least one set of picture data included in a (j-t)th
10 block.

1 10. The editing apparatus of Claim 7,
2 wherein if $j-i-1 < u$, the specifying unit once again
3 specifies the two sets of picture data as the start and
4 end points so as to extend the delete section, in
5 accordance with an indication from the user.

1 11. A computer-readable storage medium storing an
2 editing program that performs editing on a computer for
3 an optical disk on which a video object made up of a
4 plurality of blocks and section information are recorded,
5 each block including a plurality of sets of picture data,
6 and the section information specifying a reproduction
7 section from a set of picture data included in a block

8 to a set of picture data included in another block, the
9 editing program comprising:
10 a specifying step for specifying a set of picture
11 data as a start point of a delete section and another set
12 of picture data as an end point of the delete section in
13 the reproduction section, in accordance with an
14 indication from a user;
15 a judging step for judging whether $j-i-1 > u$ or $j-$
16 $i-1 < u$, $j-i-1$ being a total number of blocks present between
17 an i th block which includes the start point and a j th block
18 which includes the end point, i and j being integers, and
19 u being a predetermined integer;
20 a warning step for giving a warning to the user, when
21 $j-i-1 < u$; and
22 a partial deleting step for rewriting, when $j-i-$
23 $1 > u$, the section information so that part of the
24 reproduction section preceding the delete section and
25 part of the reproduction section succeeding the delete
26 section become two consecutive reproduction sections, and
27 deleting blocks from an $(i+s+1)$ th block to a $(j-t-1)$ th
28 block from the optical disk, s and t being integers that
29 satisfy $u=s+t$.

1 12. The storage medium of Claim 11,
2 wherein the editing program further comprises

3 a dividing step for copying, when $j-i-1 < u$, part of
4 blocks from the i th block to an $(i+s)$ th block which
5 overlaps blocks from a $(j-t)$ th block to the j th block,
6 setting a block sequence from the start of the video object
7 to the $(i+s)$ th block and a block sequence from the copied
8 part to the end of the video object as two independent
9 video objects, and rewriting the section information so
10 that the two video objects become the two consecutive
11 reproduction sections,

12 wherein the warning step warns the user that a size
13 of data recorded on the optical disk will increase due
14 to the copying.

1 13. The storage medium of Claim 12,

2 wherein the computer includes a holding unit which
3 holds mode information showing that the editing apparatus
4 is in a capacity priority mode, the capacity priority mode
5 being a mode that prioritizes acquirement of free space
6 on the optical disk,

7 the editing program further comprises

8 a switching step for switching the mode information
9 to an editing priority mode in accordance with an
10 indication from the user, the editing priority mode being
11 a mode that prioritizes flexibility in editing, and

12 the dividing step copies the part only when the mode

13 information shows the editing priority mode.

1 14. The storage medium of Claim 13,
2 wherein if $j-i-1 < u$ when the mode information shows
3 the capacity priority mode, the specifying step once again
4 specifies the two sets of picture data as the start and
5 end points so as to extend the delete section, in
6 accordance with an indication from the user.

1 15. A computer-readable storage medium storing an
2 editing program that performs editing on a computer for
3 an optical disk on which a video object made up of a
4 plurality of blocks and section information are recorded,
5 each block including a plurality of sets of picture data,
6 and the section information specifying a reproduction
7 section from a set of picture data included in a block
8 to a set of picture data included in another block, the
9 editing program comprising:

10 a specifying step for specifying a set of picture
11 data as a start point of a delete section and another set
12 of picture data as an end point of the delete section in
13 the reproduction section, in accordance with an
14 indication from a user;

15 a judging step for judging whether $j-i-1 > u$ or $j-$
16 $i-1 < u$, $j-i-1$ being a total number of blocks present between

17 an i th block which includes the start point and a j th block
18 which includes the end point, i and j being integers, and
19 u being a predetermined integer;

20 a notifying step for notifying the user that the
21 deletion is prohibited, when $j-i-1 < u$; and

22 a partial deleting step for rewriting, when $j-i-1 > u$, the section information so that part of the
23 reproduction section preceding the delete section and
24 part of the reproduction section succeeding the delete
25 section become two consecutive reproduction sections, and
26 deleting blocks from an $(i+s+1)$ th block to a $(j-t-1)$ th
27 block from the optical disk, s and t being integers that
28 satisfy $u=s+t$.
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1 16. The storage medium of Claim 15,

2 wherein if $j-i-1 < u$, the specifying step once again
3 specifies the two sets of picture data as the start and
4 end points so as to extend the delete section, in
5 accordance with an indication from the user.

1 17. An editing program for performing editing on a
2 computer for an optical disk on which a video object made
3 up of a plurality of blocks and section information are
4 recorded, each block including a plurality of sets of
5 picture data, and the section information specifying a

6 reproduction section from a set of picture data included
7 in a block to a set of picture data included in another
8 block, the editing program comprising:

9 a specifying step for specifying a set of picture
10 data as a start point of a delete section and another set
11 of picture data as an end point of the delete section in
12 the reproduction section, in accordance with an
13 indication from a user;

14 a judging step for judging whether $j-i-1 > u$ or $j-$
15 $i-1 < u$, $j-i-1$ being a total number of blocks present between
16 an i th block which includes the start point and a j th block
17 which includes the end point, i and j being integers, and
18 u being a predetermined integer;

19 a warning step for giving a warning to the user, when
20 $j-i-1 < u$; and

21 a partial deleting step for rewriting, when $j-i-$
22 $1 > u$, the section information so that part of the
23 reproduction section preceding the delete section and
24 part of the reproduction section succeeding the delete
25 section become two consecutive reproduction sections, and
26 deleting blocks from an $(i+s+1)$ th block to a $(j-t-1)$ th
27 block from the optical disk, s and t being integers that
28 satisfy $u=s+t$.

1 18. The editing program of Claim 17,

2 wherein the editing program further comprises
3 a dividing step for copying, when $j-i-1 < u$, part of
4 blocks from the i th block to an $(i+s)$ th block which
5 overlaps blocks from a $(j-t)$ th block to the j th block,
6 setting a block sequence from the start of the video object
7 to the $(i+s)$ th block and a block sequence from the copied
8 part to the end of the video object as two independent
9 video objects, and rewriting the section information so
10 that the two video objects become the two consecutive
11 reproduction sections,

12 wherein the warning step warns the user that a size
13 of data recorded on the optical disk will increase due
14 to the copying.

1 19. The editing program of Claim 18,
2 wherein the computer includes a holding unit which
3 holds mode information showing that the editing apparatus
4 is in a capacity priority mode, the capacity priority mode
5 being a mode that prioritizes acquirement of free space
6 on the optical disk,

7 the editing program further comprises
8 a switching step for switching the mode information
9 to an editing priority mode in accordance with an
10 indication from the user, the editing priority mode being
11 a mode that prioritizes flexibility in editing, and

12 the dividing step copies the part only when the mode
13 information shows the editing priority mode.

1 20. The editing program of Claim 19,
2 wherein if $j-i-1 < u$ when the mode information shows
3 the capacity priority mode, the specifying step once again
4 specifies the two sets of picture data as the start and
5 end points so as to extend the delete section, in
6 accordance with an indication from the user.

1 21. An editing program for performing editing on a
2 computer for an optical disk on which a video object made
3 up of a plurality of blocks and section information are
4 recorded, each block including a plurality of sets of
5 picture data, and the section information specifying a
6 reproduction section from a set of picture data included
7 in a block to a set of picture data included in another
8 block, the editing program comprising:

9 a specifying step for specifying a set of picture
10 data as a start point of a delete section and another set
11 of picture data as an end point of the delete section in
12 the reproduction section, in accordance with an
13 indication from a user;

14 a judging step for judging whether $j-i-1 > u$ or $j-$
15 $i-1 < u$, $j-i-1$ being a total number of blocks present between

16 an i th block which includes the start point and a j th block
17 which includes the end point, i and j being integers, and
18 u being a predetermined integer;

19 a notifying step for notifying the user that the
20 deletion is prohibited, when $j-i-1 < u$; and

21 a partial deleting step for rewriting, when $j-i-1 > u$, the section information so that part of the
22 reproduction section preceding the delete section and
23 part of the reproduction section succeeding the delete
24 section become two consecutive reproduction sections, and
25 deleting blocks from an $(i+s+1)$ th block to a $(j-t-1)$ th
26 block from the optical disk, s and t being integers that
27 satisfy $u=s+t$.
28

1 22. The editing program of Claim 21,

2 wherein if $j-i-1 < u$, the specifying step once again
3 specifies the two sets of picture data as the start and
4 end points so as to extend the delete section, in
5 accordance with an indication from the user.